Panasonic Interface adapter for external signal

CZ-TA31P Installation Manual

Safety Precautions

- Before starting installation, be sure to thoroughly read the "Safety Precautions" section of this manual for proper installation.
- Each of safety precaution in this manual contains important safety information. Be sure to observe them.
- The following indication is used to classify and describe the risk and damage caused by improper installation due to ignoring these indications.

⚠ Warning	This indicates a hazard that could result in death, serious injury or fire due to incorrect operation.

- The following symbol is used to classify and describe the items to be observed.

❗	This symbol denotes a "compulsory" item which must be carried out.

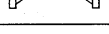
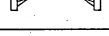
- After installing the wired remote controller, carry out a test operation to check that the remote controller functions properly and also explain the operation and cleaning procedures to the customer in accordance with the details in the instruction manual. Furthermore, ask the customer to keep this installation manual and the instruction manual in a safe place for future reference.

⚠ Warning	
▲ Seek installation service from a dealer or specialist. Unsatisfactory or imperfect installation carried out by user/customer could result in electrical shock and/or fire, etc.	❗
▲ Perform the installation properly by following this installation manual. Unsatisfactory or imperfect installation could result in electrical shock and/or fire, etc.	❗
▲ Carry out electrical works in accordance with applicable local standards and/or the "Wiring Standards". Be sure to use a circuit exclusively for this adapter. Insufficient capacity of power circuit or unsatisfactory or imperfect installation could result in electrical shock and/or fire.	❗
▲ Be sure to turn off the main power before commencing wiring. Wiring while the power is turned on could result in electrical shock, etc.	❗
▲ Be sure to connect wires using the designated electrical wires. Be sure to fix the electrical wiring in such way that external force applied to the terminal connection is avoided. Imperfect connection or fixing could result in abnormal heat and/or fire, etc.	❗
▲ Do not touch the control board once the power of the main unit is turned on. Accidental contact with the control board could result in electrical shock.	❗

1. Functional Overview

- Output the operation condition of the indoor unit (running, fan, cooling, heating or abnormal) to an external device.
- Equipped with a relay terminal which turns on and off the external device.
- Able to turn on and off the air conditioner/ventilator of the designated model number with wired remote controller of an air conditioner.
- Performs remote operation control of the indoor unit as external input by the remote/local input and remote ON/OFF input.

2. Parts Included in the Package

Name	Q'ty	Schematic illustration	Application	Name	Q'ty	Schematic illustration	Application
Adapter circuit board	1		For external device control	Spacer	4		For fixing of adapter circuit board
Signal wire (white)	1	 13 wires	For connection with indoor unit printed circuit board (CN-OPT3)	Manual	1		Work instructions
Signal wire (Yellow)	1	 13 wires	For connection with indoor unit printed circuit board (CN-OPT3)	Signal wire	1	5 Wires	Signal wire for external device

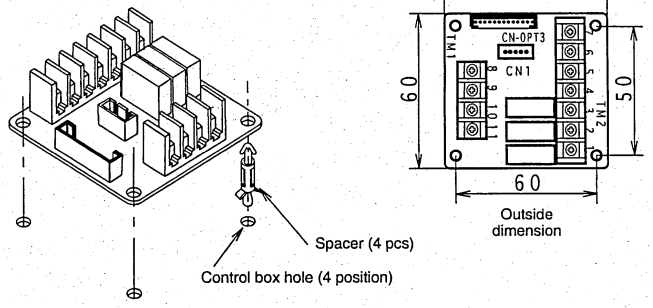
3. Applicable Models

- This adapter circuit board can be used for air conditioners listed below.

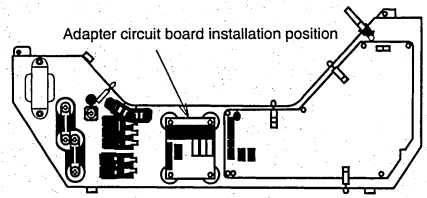
Indoor unit type	Model No.	Performance rank
Ceiling cassette type	CS-F★★DB4E5 CS-D★★DB4H5	14, 18, 24, 28, 34, 43, 50
Ceiling suspension type	CS-F★★DTE5 CS-D★★DTH5	18, 24, 28, 34, 43, 50
High static pressure duct type	CS-F★★DD1TE5	24, 28, 34, 43, 50
Medium static pressure duct type	CS-F★★DD2E5 CS-D★★DD2H5	24, 28, 34, 43, 50
Low static pressure duct type	CS-F★★DD3TE5	14, 18, 24, 28, 34, 43, 50

4. Installing Adapter circuit board

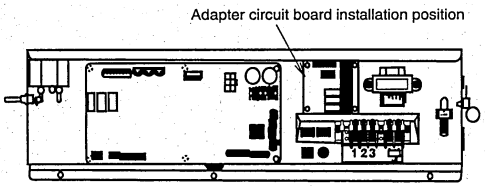
- This adapter circuit board is to be installed inside the electrical component box of the indoor unit. It is recommended to install this adapter circuit board before mounting the indoor unit on the ceiling for easier wiring work.
- Attach the provided spacer inside the power board of the indoor unit.
- Install the adapter circuit board by following the instructions in the illustration below.



Installation position (for ceiling cassette type)



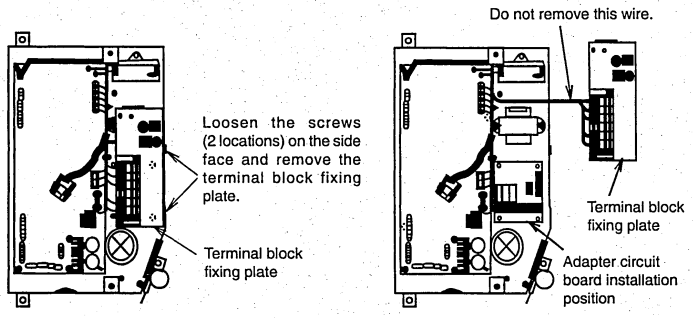
Installation position (for ceiling suspension type)



Installation position (for duct types)

※NOTE: Be sure to install the adapter circuit board before carrying out the main power connection for the indoor unit. Remove the terminal block fixing plate.

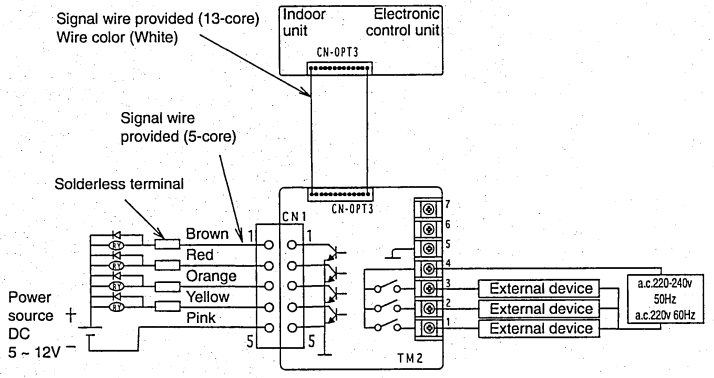
Procedures Carry out installation of the adapter circuit board and wiring. Reattach the terminal block fixing plate to the original position.


Loosen the screws (2 locations) on the side face and remove the terminal block fixing plate.
Terminal block fixing plate
Do not remove this wire.
Terminal block fixing plate
Adapter circuit board installation position

5. Device Wiring Method (when connecting an ordinary external device)

NOTE

- Be sure to use white-color (13-core) signal wire for signal wire to be connected to the indoor unit.
- Be sure to connect the wires correctly to terminal board with connecting the crimp type ring terminal to the wires.
- Do not connect any device which exceeds the electrical ratings of each terminal.
- The connection shown in the illustration below is an example only. All the power source, external device and relay, etc. are to be procured locally.



Description of Each Terminal

CN1	1	Operation signal	Signal output
	2	Cooling signal	
	3	Heating signal	Manipulate signal
	4	Fan signal	Max. DC 12V
	5	GND	100mA

TM2	7	Remote/local input	Non-voltage A contact input
	6	Remote ON/OFF input	
	5	Input signal COM	
	4	Output signal COM	Non-voltage A contact relay output
	3	ON/OFF signal output	Contact ratings AC 250V 3A DC 30V 3A
	2	Abnormal signal output	
	1	Fan operation signal output	

TM1	8	※NOTE This terminal CANNOT be used
	9	
	10	
	11	

Procedures

1. Attach CZ-TA31P inside the power board of the indoor unit.
2. Connect CZ-TA31P and the electronic control device of the indoor unit with the signal wire provided.
3. Connect to the necessary external device.
4. After all the connections and wirings are completed, turn on the power of the indoor unit and carry out a test operation.

6. Device Wiring Method (when connecting an energy recovery ventilator)

⚠ Warning

▲ Never connect any device other than the designated energy recovery ventilators.
Connection of a device other than the designated one could result in smoke and/or fire.

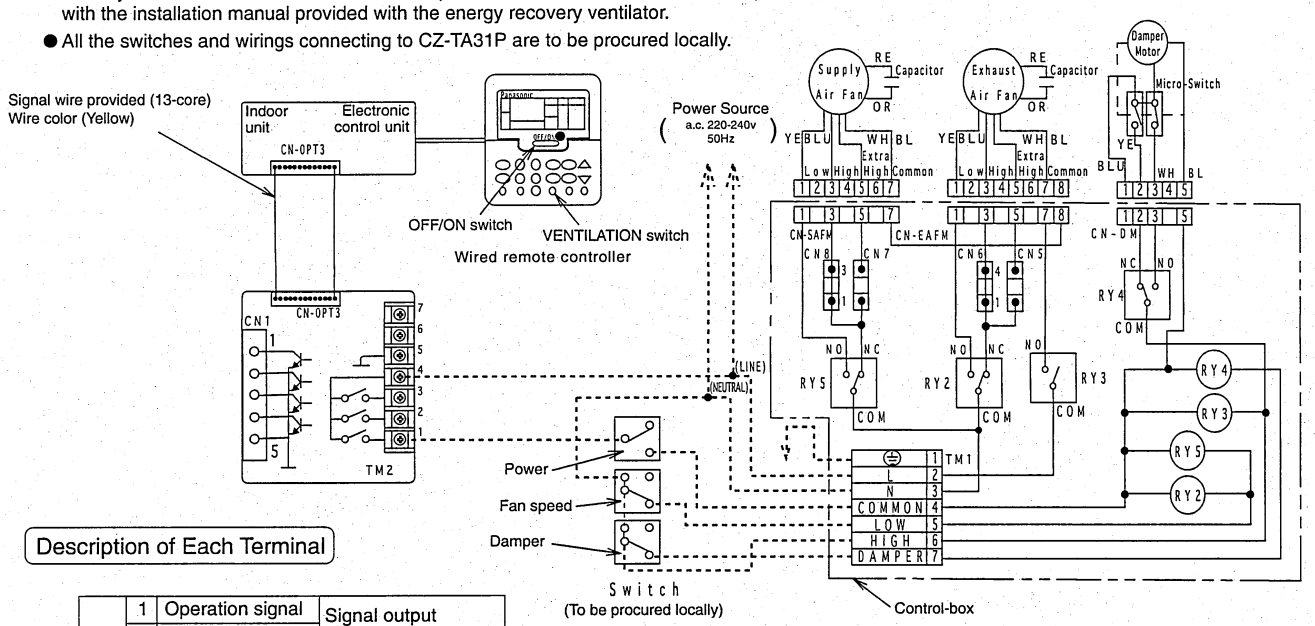
NOTE

- Be sure to use yellow-color (13-core) signal wire for signal wire to be connected to the indoor unit.
- Be sure to connect the wires correctly to terminal board with connecting the crimp type ring terminal to the wires.
- For any matter not contained in this manual, perform the work in accordance with the installation manual provided with the energy recovery ventilator.
- All the switches and wirings connecting to CZ-TA31P are to be procured locally.

Applicable Models

- This adapter circuit board can be used for energy recovery ventilators listed below.

Manufacturer	Model No.
Panasonic	FY-250ZDY2P
	FY-350ZDY2P
	FY-500ZDY2P
	FY-800ZDY2P
	FY-01KZDY2AP



Description of Each Terminal

CN1	1	Operation signal	Signal output
	2	Cooling signal	
	3	Heating signal	Manipulate signal
	4	Fan signal	Max. DC 12V
	5	GND	100mA

TM2	7	Remote/local input	Non-voltage A contact input
	6	Remote ON/OFF input	
	5	Input signal COM	
	4	Output signal COM	Non-voltage A contact relay output Contact ratings AC 250V 3A DC 30V 3A
	3	ON/OFF signal output	
	2	Abnormal signal output	
	1	Ventilation unit ON/OFF signal	

TM1	8	※NOTE
	9	This terminal
	10	CANNOT be used
	11	

Wired Remote Controller Local Setting Procedures

1. While the indoor unit is not in operation, press the TEST RUN switch for 5 seconds or more to enter the "LOCAL MODE".
2. Select "MODE No.12" with the temperature △/▽ switch.
3. Press the SELECT switch to make the "set value" selectable.
4. Select the "set value" with UP (TIMER) / DOWN (TIMER) switch.
5. Confirm the displayed settings with the SET switch.
6. After making sure that the settings are correct, press the TEST RUN switch to return to the ordinary display.

Test operation will be canceled automatically if no switch is pressed for 30 seconds.

Mode No.	Item	Set value	Setting
12	Ventilation unit control (optional)	000	-
		001	Yes (no interface)
		002	Yes (OFF interface)
		003	Yes (ON/OFF interface)

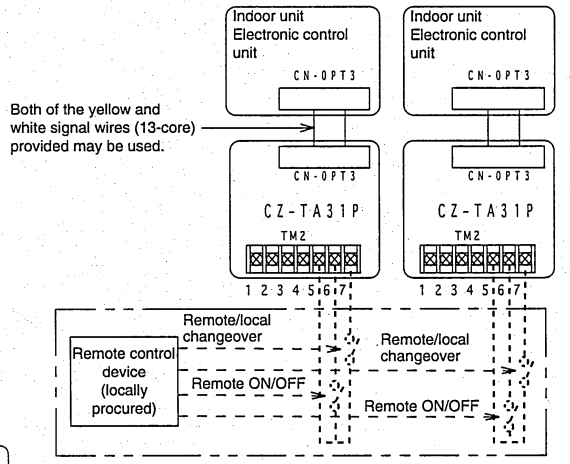
NOTE 1. The factory default setting is "000".

Mechanism of Wired Remote Controller and VENTILATION Switches

Wired remote controller local setting code	ON/OFF by VENTILATION switch on the remote controller	Interface for air conditioner		Remote controller switch operation and function of ventilation unit	
		Air conditioner OFF→ON	Air conditioner ON→OFF	Operation	Remarks
000	X	X	X	The VENTILATION switch on the remote controller does not function.	Factory default setting
001	Ventilation unit ON/OFF	X	X	Independent ON/OFF operation for the ventilation unit can be performed with the VENTILATION switch on the remote controller.	The ventilation unit can be turned ON/OFF independently of turning ON/OFF of air conditioner.
002	Ventilation unit ON/OFF	X	Ventilation unit OFF	If the air conditioner is turned OFF from ON-condition, the ventilation unit is also turned OFF.	If you wish to use the ventilation unit continuously after the air conditioner is turned OFF, the VENTILATION switch must be set to ON.
003	Ventilation unit ON/OFF	Ventilation unit ON	Ventilation unit OFF	The ventilation unit is also turned ON when the air conditioner is turned ON. The ventilation unit is also turned OFF when the air conditioner is turned OFF.	The ventilation unit can be turned ON/OFF with the VENTILATION switch independently of turning ON/OFF of air conditioner. If you wish to use the ventilation unit continuously after the air conditioner is turned OFF, the VENTILATION switch must be set to ON.

7. Remote / Local Control Wiring Method

- Be sure to connect the wires correctly to terminal board with connecting the crimp type ring terminal to the wires.



NOTE

1. The operation cannot be stopped with remote controller if the remote/local changeover switch is set to ON.
2. In the above case, switches for operation mode setting, fan speed setting, air swing setting, filter sign reset and test run can be operated with remote controller.

8. Test Operation

- Make sure that wirings and settings of each device are correct.
- After that, turn on the power and ensure that the device can be operated properly.